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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,988	01/29/2002	Zhihao Yang	83965HEC	6122

7590

03/28/2003

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EXAMINER

CHAKRABARTI, ARUN K

ART UNIT

PAPER NUMBER

1634

3

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/059,988

Applicant(s)
Yang

Examiner
Arun Chakrabarti

Art Unit
1634



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 29, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2 6) ☒ Other: *Detailed Action*

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-14 are rejected under 35 U.S.C. 102 (a) as being anticipated by Gilmanshin et al. (U.S. Patent 6,263,286 B1) (July 17, 2001).

Gilmanshin et al teach a method for single molecule identification of a target DNA molecule in a random coil state (Abstract, Column 26, lines 45 to column 27, line 10 and Figures 8-9) comprising the following steps:

a) attaching an optically distinguishable material to a DNA sequence recognition unit (Column 25, lines 35-54);

b) hybridizing the DNA sequence recognition unit to the target DNA molecule in a random coil state to form a hybridized DNA complex in a random coil state (Column 19, lines 42-63);

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c) stretching the hybridized DNA complex in a random coil state to form a hybridized DNA complex in a substantially linear configuration (Column 26, lines 45 to column 27, line 10 and Figures 8-9); and

d) detecting the optically distinguishable material in a sequential manner along the substantially linear hybridized DNA complex, thereby identifying the target DNA molecule (Examples 2-3 and Figure 9).

Gilmanshin et al teach a method wherein the optically distinguishable material comprises colored microparticles having different shapes (Column 25, line 18 to column 26, line 37 and figure 8).

Gilmanshin et al teach a method, wherein the colored microparticles comprise dye or nanocrystals (column 16, lines 38-50).

Gilmanshin et al teach a method, wherein the DNA sequence recognition unit comprises DNA or peptide nucleic acids (column 8, lines 36-62).

Gilmanshin et al teach a method, wherein the DNA sequence recognition units comprise any protein scaffold or synthetic molecular moiety capable of recognizing a specific DNA sequence (column 8, lines 36-62 and Column 17, lines 52-65).

Gilmanshin et al teach a method, wherein the stretching of the hybridized DNA complex in a random coil state to form a hybridized DNA complex in a substantially linear configuration is accomplished by using a mechanical means (Column 26, line 64 to Column 27, line 10).

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Gilmanshin et al teach a method for single molecule identification of a target DNA molecule in a random coil state (Abstract, Column 26, lines 45 to column 27, line 10 and Figures 8-9) comprising the following steps:

a) stretching the hybridized DNA complex in a random coil state to form a hybridized DNA complex in a substantially linear configuration (Column 26, lines 45 to column 27, line 10 and Figures 8-9);

b) attaching an optically distinguishable material to a DNA sequence recognition unit (Column 25, lines 35-54);

c) hybridizing the DNA sequence recognition unit to the target DNA molecule in a substantially linear configuration to form a hybridized DNA complex in a substantially linear configuration (Column 19, lines 42-63); and

d) detecting the optically distinguishable material in a sequential manner along the substantially linear hybridized DNA complex, thereby identifying the target DNA molecule (Examples 2-3 and Figure 9).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D., whose telephone number is (703) 306-5818. The examiner can normally be reached on 7:00 AM-4:30 PM from Monday to Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703) 308-1119. The fax phone number for this

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Group is (703) 305-7401. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group analyst Chantae Dessau whose telephone number is (703) 605-1237.

Arun Chakrabarti,

Patent Examiner,

March 19, 2003


ARUNK. CHAKRABARTI
PATENT EXAMINER